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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,647	11/25/2003	James Henry DeVore	60,446-243;03ZFM049	5646
26096 7590 08/29/2008 CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			EXAMINER LE, DAVID D	
			ART UNIT 3681	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

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1 UNITED STATES PATENT AND TRADEMARK OFFICE

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4 BEFORE THE BOARD OF PATENT APPEALS
5 AND INTERFERENCES
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7

8 *Ex parte* JAMES HENRY DEVORE, ROBERT ANTHONY SAYMAN,
9 CHARLES E. ALLEN, JR., WINFRIED STURMER, KARL-FRITZ
10 HEINZELMANN, LUDGER RONGE, LOREN CHRISTOPHER DREIER,
11 RONALD PETER MUETZEL, and MUNEER ABUSAMRA
12

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14 Appeal 2008-1306
15 Application 10/721,647
16 Technology Center 3600
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19 Decided: August 29, 2008
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22 *Before* WILLIAM F. PATE, III, MURRIEL E. CRAWFORD, and
23 MICHAEL W. O'NEILL, *Administrative Patent Judges*.

24
25 CRAWFORD, *Administrative Patent Judge*.
26
27

28 DECISION ON APPEAL

29 STATEMENT OF THE CASE

30 Appellants appeal under 35 U.S.C. § 134 (2002) from a final rejection
31 of claims 1 to 4, 6, 13, and 17 to 20. We have jurisdiction under 35 U.S.C.
32 § 6(b) (2002).

1 Appellants invented a vehicle transmission system which includes a
2 controller in communication with first and second sensors which is operable
3 to determine the relative movement between a first rotational component and
4 a second rotational component indicative of approximately zero torque
5 condition (Specification 1, and 3 to 4).

6 Claim 1 under appeal reads as follows:
7

8 1. A vehicle transmission system comprising:
9 an automated mechanical transmission shiftable
10 between a first and a second gear ratio;
11 a first rotational component;
12 a second rotational component which rotates
13 relative to said first component;
14 a first sensor adjacent said first rotational
15 component;
16 a second sensor adjacent said second
17 rotational component;
18 a controller in communication with said first
19 sensor and said second sensor, said controller
20 operable to determine a relative movement
21 between said first rotational component and said
22 second rotational component indicative of an
23 approximately zero torque condition to initiate a
24 shift between said first and said second gear ratio.
25

26 The Examiner rejected claims 1 to 4, 6, 13, and 17 to 20 under 35
27 U.S.C. § 102(b) as being anticipated by Huber '978.

28 The prior art relied upon by the Examiner in rejecting the claims on
29 appeal is:

30	Huber (Huber '978)	US 6,151,978	Nov. 28, 2000
31	Huber (Huber '996)	US 6,167,996 B1	Jan. 2, 2001

1 Appellants contend that Huber '978 does not disclose a controller
2 operable to determine a relative movement between a first rotational
3 component and a second rotational component indicative of approximately
4 zero torque.

5
6 **ISSUE**

7 The issue is whether the Appellants have shown that the Examiner
8 erred in finding that Huber '978 discloses a controller operable to determine
9 a relative movement between a first rotational component and a second
10 rotational component indicative of approximately zero torque.

11
12 **FINDINGS OF FACT**

13 Appellants disclose an automatic mechanical transmission system. In
14 discussing the prior art, the Appellants state that prior art transmission
15 systems measure or model the absolute value of the external forces present
16 to identify the zero torque value in terms of absolute torque at the engine
17 and/or other power path points within a vehicle driveline (Specification 1).
18 Appellants state that sensing the absolute torque may be relatively
19 complicated and subject the sensing members to significant stress and
20 thereby reduce their longevity. Therefore, to overcome these disadvantages,
21 the Appellants determine when zero torque is achieved by measuring the
22 relative movement between two vehicle components which are separated
23 by a gear interface (Specification 2). Appellants disclose that two sensors
24 58 and 60 sense the relative movement of shafts 52 and 54 and when a
25 controller identifies a relative movement signature indicative of zero relative

1 torque between shafts 52 and 54 shifting of the gear interface 56 is initiated
2 (Specification 4). Specifically, Appellants disclose:

3 Referring to Figure 2, the shift controller 46
4 relates a relative movement signature to a zero
5 relative torque condition between a first shaft 52
6 and a second shaft 54 which have a gear interface
7 56 therebetween. When the torque changes from
8 “pull” to “push” or from “push” to “pull,” the gear
9 clearance leads to relative movement of the shafts
10 52, 54 which indicates a zero torque condition
11 between shafts 52 and 54.
12

13 (Specification 3-4, ¶ [23]).
14

15 Huber ‘978 discloses a vehicle transmission system that includes two
16 sensors 40 and 42. Sensors 40 and 42 provide speed information about
17 shafts 16 and 20 (col. 3, ll. 24 to 26). A controller 32 communicates with
18 the engine control 34 to cause the engine 12 to be driven in a known manner
19 to a speed that results in zero torque between the shafts 16 and 20 (col. 2, ll.
20 61 to 64). Once zero torque is achieved, the shift actuator 36 causes the
21 shifting into the chosen gear (col. 2, l. 65 to col. 3, l. 7). Huber ‘978 states
22 that the therein disclosed invention includes the method of Huber ‘996 (col.
23 3, ll. 27 to 31).

24 Huber ‘996 discloses a method for determining clutch status that
25 includes two sensors 40 and 42. Sensors 40 and 42 provide speed
26 information about shafts 16 and 20 (col. 3, ll. 31 to 33). Huber ‘996 teaches
27 that in some transmission systems, a dedicated clutch sensor is provided to
28 determine whether the clutch is open or closed but that the Huber ‘996
29 system simplifies the design by eliminating this dedicated clutch sensor (col.

1 3, ll. 19 to 25). The Huber '996 system determines the condition of the
2 clutch by comparing the speeds of the input and output shaft (col. 3, ll. 42 to
3 43). Huber '996 does not determine a relative movement between the shafts
4 16 and 20 indicative of approximately a zero torque condition.

5
6 ANALYSIS

7 We will not sustain the Examiner's rejection because we agree with
8 the Appellants that the cited prior art does not disclose a controller which
9 determines a relative movement between a first and second rotational
10 component indicative of approximately zero torque. Huber '978 discloses
11 that the controller 32 drives the engine to a speed that results in zero torque
12 rather than comparing the relative movement of the shafts to determine when
13 zero torque is reached. While Huber '996 does compare the speeds of two
14 shafts, this comparison is to determine whether the clutch is open not to
15 determine whether zero torque has been reached.

16 In view of the foregoing, the decision of the Examiner is reversed.

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18 REVERSED

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22 hh

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